P

USSR / General and Specialized Zoology - Insects.

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20916

(18 times more). In the autumn of 1956, a similar experiment was conducted on the transplantation grounds adjacent to a plot where the highest amount of Caenocrepis was revived in the spring. In the spring of 1957, the average per one m^2 was, with piling off, 2.8 Caenocrepis, and without piling off, 11.5 Caenocrepis. The infection of 70% of the weevil's eggs by Caenocrepis reduced the number of wintering weevils by half. The maintenance of the soil in a mellow state during the summer increases the effectiveness of Caenocrepis. With three interrow mellowings, where in one m^2 one Caenocrepis wintered, the infectivity of the weevil eggs reached 50%, and where 11

Card 2/3

USSR / General and Specialized Zoology - Insects. P

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 20916

egg eaters had wintered but only one mellowing was effected, only 21% of eggs were infected. -- A. P. Adrianov

Card 3/3

ZHIGAYEV, G.N.

Method for mass propagation of the cabbage moth as a host for Trichogramma. Nauch.trudy Inst.ent.i fit.2:179-188 '50. (Chalcid flies) (Owlet moths)

(MLRA 9:2)

ZHIGAYEV, G.N.

[redacted]

Biology and results of acclimatization of Paracodrus arterogimus Hal. (Proctotrupidae), a parasite of wireworms, in the Ukraine. Nauch.trudy Inst.ent.i fit. 5:153-156 '54. (MLRA 9:1)

(Ukraine--Wireworm) (Parasites--Wireworm)

ZHIGAYEV, G.N.

Parasite of the click beetle larvae Lacon murinus L. Nauch. trudy Inst. ent.i fit. 5: 157-158 '54. (MLRA 9:1)

(Parsites--Click beetle) (Click beetle)

ZHIGAYEV, G. N.

"A New Method of Combating "Provolochniki" with the Aid of Lure Crops." Min. Culture USSR, Belaya Tserkov' Agricultural Inst., Kiev, 1955. (Dissertation for the Degree of Candidate in Agricultural Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

ZHIGAYEV, G. N.

TELENGA, N.A.; ZHIGAYEV, G.N.

Preseeding treatment of sugar beet seeds with 12 benzene hexachloride dust in controlling sugar beet weevils. Nauch.trudy Inst ent. i fit. AN URSR 7:88-95, '56. (MLRA 10:3)

(Benzene hexachloride) (Seeds--Disinfection)
(Sugar beets--Diseases and pests)

ZHIGAYEV, G.N.

Experiments with benzene hexachloride in controlling sugar beet weevil larvae on the collective farms of Aleksandrovka District, Kirovograd Province. Nauch. trudy Inst. ent.i fit. AN URSR 7:104-108 '56. (MLRA 10:3)

(Aleksandrovka District--Sugar beets--Diseases and pests)
(Benzene hexachloride)

PALIOKHA, I.V.; ZHIGAYEV, G.N.

Control of the larvae of sugar beet weevils by working benzene hexachloride into the soil. Sakh.prom.30 no.2:67-70 F '56. (MIRA 9:7)

1.Institut entomologii i fitopatologii AN USSR.
(Benzene hexachloride) (Sugar beets--Diseases and pests)

ZHIGAYEV, G.N., kand.sel'skokhozyaystvennykh nauk

Using caenocrepis against weevils. Zashch.rast. ot vred. i bol.
3 no.2:58 Mr-Ap '58. (MIRA 11:4)
(Weevils) (Insects, Injurious and beneficial--Biological control)

DYADECHKO, N., kand. biolog. nauk; ZHIGAYEV, G., kand. sel'skokhoz. nauk

Thrips on millet. Zashch. rast. ot vred. i bol. 10 no.6:43 '65. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.

DYADECHKO, N.P.; ZHIGAYEV, G.N.

"Mikron" in the control of the Colorado beetle. Zashch. rast. ot vred. i bol. 9 no.5:52 '64. (MIRA 17:6)

1. Ukrainskiy institut zashchity rasteniy.

DYADECHKO, N.P.; ZHIGAYEV, G.N.

Injury of pea inflorescence by thrips. Nauch. dokl. vys.shkoly; biol. nauki no. 2:33-34 '64. (MIRA 17:5)

1. Rekomendovana Ukrainskim nauchno-issledovatel'skim institutom zashchity rasteniy.

UMNIKOVA, V.A.; ZHIGAYEV, G.N., kand.sel'skokhoz.nauk

Brief information. Zashch. rast. ot vred. i bol. 7 no.11:37-52 N '62.

(MIRA 16:7)

1. Agronom po zashchity rasteniy Sovetskogo rayona, Saratovskoy oblasti (for Umnikoga). 2. Ukrainskiy institut zashchity rasteniy (for Zhigayev).

DYADECHKO, N.P.; ZHIGAYEV, G.N.; KOVTUN, I.V.

Eliminating perennial foci of the Colorado beetle. Zashch. rast. ot vred. i bol. 8 no.9:47 S '63. (MIRA 16:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy, Kiyev.

ZHIGAYEV, G.N., kand.sel'skokhoz.nauk

Effect of beauverin on the fertility of the Colorado beetle.
Zashch. rast. ot vred. i bol. 8 no.2:46 F '63. (MIRA 16:7)

1. Ukrainskiy institut zashchity rasteniy.
(Potato beetle—Biological control) (Beauveria)

USSR / General and Special Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16475

Author : Zhigayev G. N.
Inst : Institute of Entomology and Phytopathology Academy of Sciences Ukrainian Soviet Socialist Republic.
Title : An experiment in the Use of Hexachlorane in the Control of the Larvae of the Beet Weevil in Collective Farms of the Alexandrovsk rayon, Kirovograd oblast'.
(Opyt primeneniya geksakhlorana dlya bor'by s lichinkami sveklovichnago dolgonosika v kolkhozakh Aleksandrovskogo rayona, Kirovograd skoi oblasti)

Orig Pub: Nauchn. tr. In-ta entomol. i fitopatol. AN UkSSR, 1956.

Abstract: In production experiments on 13 collective farms

Card 1/3

USSR / General and Special Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16475

Abstract: a mixture of 25% dust of hexachlorane and superphosphate was introduced into the planting beds with combination sowing machines at the time of beet planting or 50 kg/hectare of HCCH was sprayed on the surface of the soil with fertilizer spreaders and subsequent use of the cultivator. The mass introduction of hexachlorane sharply decreased the number of the weevil larvae. Apparently hexachlorane kept the beetles away; fewer eggs were laid; the young sprouts were little damaged by the weevils and small fleas. When hexachlorane was introduced into the beds the number of larvae was large, but many of the pupae died of "muscardine", while the number of hibernating beetles was larger than in the control plants. When hexachlorane was introduced into the beds the number of larvae was

Card 2/3

USSR / General and Special Zoology. Insects

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16475

Abstract: large, but many of the pupae died of "muscardine". The number of hibernating beetles decreased by 91.5% when hexachlorane was introduced compactly, when 8 kg/hectare of hexachlorane was introduced into the planting beds the beetles decreased by 63.8% and when 6 kg/hectare of hexachlorane was introduced into the beds the number of beetles decreased by 45.7%. When hexachlorane was introduced compactly there were 100,300 roots on one hectare, when hexachlorane was introduced directly into the beds there were 87300 and 76300 roots, while in the control plants there were 74800 roots. The use of hexachlorane had no effect on the sugar content of the roots..

Card 3/3

USSR / General and Special Zoology. Insects. P

USSR / General and Special Zoology. Insects P

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16465

Abstract: venting the beetles from moving into the initial planting. The beetles of the grey weevil when they fed on infected sprouts died sooner than the common weevil. The destructiveness of little fleas was not demonstrated during the toxicity of the sprouts. A mass exit to the surface of wire-shaped insects and larvae of may-beetles (8-10 per $1m^2$) was observed on the experimental plots.

Card 3/3

ZHIGAREV, L.A.; KAPLINA, T.N.

Solifluctional forms of relief in the northeast of the U.S.S.R. Trudy Inst.merzl.AN SSSR 16:46-59 '60.
(MIRA 13:4)

(Anadyr Range--Solifluction)

ZHIGAREV, L.A.

Experimental investigation of the speed of solifluction movement over slopes. Trudy Inst.merzl.AN SSSR 16:183-190 '60.
(MIRA 13:4)

(Solifluction)

BORDADYN, Afanasiy Fedorovich; VLASOV, Grigoriy Il'ich; ZHIGAREV, Lev
Viktorovich; SADE, L.S., red.; PERSON, M.N., tekhn.red.

[China strides ahead] Shagaet Kitai. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1959. 148 p. (MIRA 13:3)
(China--Economic condition)

89914

S/062/61/000/002/011/012
B115/B207

5.3700

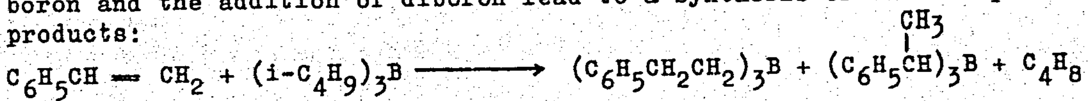
AUTHORS: Zakharkin, L. I., and Zhigareva, G. G.

TITLE: Reaction of triisobutyl boron and diborane with styrene

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 2, 1961, 369-370

X

TEXT: The authors studied the interaction of triisobutyl boron and diborane with styrene since, in the case of styrene, contrary to other α-olefins, in the reaction with triisobutyl aluminum and dialkyl aluminum hydride an aluminum atom is added to the α- and β-carbon atoms of the vinyl group (L. I. Zakharkin and V. V. Gavrilenko, Izv. AN SSSR. Otd. khim. n. 1959, 1507). The displacement reaction of styrene by triisobutyl boron and the addition of diboron lead to a synthesis of the two possible products:



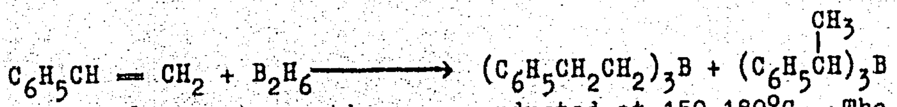
$$C_6H_5CH = CH_2 + (i\text{-}C_4H_9)_3B \longrightarrow (C_6H_5CH_2CH_2)_3B + (C_6H_5\overset{\overset{CH_3}{|}}{C}H)_3B + C_4H_8$$

Card 1/4

89914

S/062/61/000/002/011/012
B115/B207

Reaction of triisobutyl boron ...



$$C_6H_5CH=CH_2 + B_2H_6 \longrightarrow (C_6H_5CH_2CH_2)_3B + (C_6H_5\overset{CH_3}{\overset{|}{C}}H)_3B$$

The displacement reaction was conducted at 150-180°C. The resulting triphenyl ethyl boron when oxidized gave a mixture of α- and β-phenylethyl alcohols in a high yield. The composition of the mixture was determined in two ways: 1) By oxidation with chromic anhydride and by precipitation of acetophenone in the form of 2,4-dinitro-phenyl hydrazone, 2) by infrared spectrometry. The phenyl-methyl carbinol content in the mixture was ~ 15%. The addition of diborane to styrene was carried out in a tetrahydrofuran solution. The reaction product was divided. One part was immediately subjected to oxidation, the other heated to 160-170°C after removal of the tetrahydrofuran, and oxidized. The mixture of isomeric phenyl-ethyl alcohols resulting from oxidation contained in both cases 15-18% phenyl-methyl carbinol. Furthermore, the authors studied the possibility of isomerization of the primary derivative $(C_6H_5CH_2CH_2)_3B$ to the secondary derivative $[C_6H_5CH(CH_3)]_3B$.

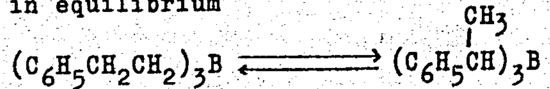
Card 2/4

89914

S/062/61/000/002/011/012
B115/B207

Reaction of triisobutyl boron ...

By the following scheme: $C_6H_5CH_2CH_2MgBr + BF_3 \cdot (C_2H_5)_2O \longrightarrow (C_6H_5CH_2CH_2)_3B$ the authors obtained tri-(β-phenyl-ethyl)boron. It was heated to 160-170°C and oxidized. A mixture of isomeric phenyl-ethyl alcohols was thus obtained, containing 12-14% phenyl-methyl carbinol. Consequently, tri-(β-phenyl-ethyl)boron isomerized to a certain degree to tri-(α-phenyl-ethyl)boron. These compounds were, under certain conditions, in equilibrium



$$(C_6H_5CH_2CH_2)_3B \rightleftarrows (C_6H_5\overset{CH_3}{\overset{|}{C}H})_3B$$

The authors thank N. A. Chumayevskiy for the quantitative determination of mixtures at his optical laboratory. Finally, the following summary is given: 1) Tri-(phenyl-ethyl)boron containing a boron atom in α- and β-position to the phenyl group forms in the reaction of triisobutyl boron and diborane with styrene. 2) Tri-(β-phenyl-ethyl)boron isomerizes when heated partly to tri-(α-phenyl-ethyl)boron. There are 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc.

Card 3/4

89914

Reaction of triisobutyl boron ...

S/062/61/000/002/011/012
B115/B207

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences USSR)

X

SUBMITTED: July 6, 1960

Card 4/4

ZAKHARKIN, L.I.; ZHIGAREVA, G.G.

Comment to the work by Brandsm and Arens "Di-(alkyn-1-yl) sulfides." Izv. AN SSSR.Otd.khim.nauk no.10:1871-1872 O '62. (MIRA 15:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Acetylene compounds)

ZAKHARKIN, L.I.; GAVRILENKO, V.V.; KHORLINA, I.M.; ZHIGAREVA, G.G.

Reduction of silicon and germanium chlorides and alkoxides by means of sodium and potassium aluminum hydrides. Izv. AN SSSR.Otd. khim.nauk no.10:1872-1874 O '62. (MIRA 15:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Silicon chloride) (Germanium chloride)
(Alkali metal aluminum hydrides)

ZAKHARKIN, L.I.; ZHIGAREVA, G.G.

Dimerization of butadiene to cis, cis-1,5-cyclooctadiene catalyzed by π-complex compounds of nickel. Izv.AN SSSR.Otd. khim.nauk no.2:386 F '63. (MIRA 16:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Butadiene) (Cyclooctadiene)

ACC NR: AP7001306 SOURCE CODE: UR/0057/66/036/012/2136/2144

AUTHOR: Zhigaylo, B.A.; Zinchenko, N.S.

ORG: Institute of Radiophysics and Electronics, Khar'kov (Institut radiofiziki i elektroniki)

TITLE: Production of ions and ion current in a modulated electron beam

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no.12, 1966, 2136-2144

TOPIC TAGS: gas ionization, impact ionization, electron beam, electron collision, beam modulation, velocity modulation, klystron

ABSTRACT: The authors (ZhTF, 34, 1306, 1964) have previously shown that velocity modulation of an electron beam can lead to increased ionization of the residual gas by the beam, owing to the nonlinear dependence of the ionization cross section on the electron velocity. In the present paper this process is treated quantitatively. The basic equations for the treatment of the problem are obtained with the aid of the following simplifying assumptions: the electron beam is infinitely broad (i.e., the problem is treated as one-dimensional) there are no electri fields in the space between the modulating gap and the collector; the effect of space charge on the motion of the electrons, scattering of the electrons by residual gas molecules, and slow secondary electrons are all negligible; and multiple ionization processes contribute negligibly. Further approximations are introduced in the solution of the equations.

Card 1/2 UDC: 537.564

ACC NR: AP7001306

The velocity dependence of the ionization cross section is represented by an empirical formula, and expressions are derived for the ion current and density. These quantities are found to depend on the modulation factor, the accelerating potential, the static transit angle of the electrons in the modulating gap, and the modulation frequency. Numerical solutions were obtained for the case when the residual gas is nitrogen. These solutions were computed for accelerating potentials from 300 to 1500 V, for the full range of modulation factors from 0 to 1, and for a number of different transit angles; the results are presented as curves showing the ratio of the ion current or density to the corresponding quantity for an unmodulated beam as functions of one of the parameters for fixed values of the other parameters. Under some conditions (in particular, for zero transit angle) the ion current is maximum for a certain modulation factor less than unity. The ion current is a rather complex function of the transit angle, having three maxima and three minima. A few experimental points are shown on some of the curves. These points are in good agreement with the calculated curves, but it is not revealed how (nor by whom) the experimental data were obtained. The authors thank V.I.Malyavko and V.A.Uskov for assistance with the computations. Orig. art. has 15 formulas and 7 figures.

SUB CODE: 20,09 SUBM DATE: 12Jul65 ORIG. REF: 003

Card 2/2

ACCESSION NR: AP4042007 S/0057/64/034/007/1306/1311

AUTHOR: Zinchenko, N.S.; Zhigaylo, B.A.

TITLE: The effect of ion focusing on velocity modulate electron beams

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1306-1311

TOPIC TAGS: electron beam, electron beam control, ionization phenomenon

ABSTRACT: Velocity modulated beams of 800 to 1400 V electrons at currents of the order of 10 mA were investigated. It was found that at pressures of the order of 10^{-5} mm Hg the velocity modulated beams were narrower (more sharply focused) than unmodulated beams, and the narrower, the greater the modulation parameter, although the opposite behavior would be expected in a hard vacuum. The cathode of the electron gun was located 5 mm from the 0.8 mm gap of the 10 kilomegacycle/sec toroidal resonant cavity which served both as modulator and accelerating electrode. Modulation coefficients from 0.5 to 1.0 were employed. The beam was collected in a Faraday cage 6 cm from the modulator. The width of the beam was observed by photographing it and by means of a vibrating probe located midway between the modulator and the collector. The focusing effect was considerable. In a 1070 V 10 mA beam at 8 x

Card 1/3

ACCESSION NR: AP4042007

$x \cdot 10^{-5}$ mm Hg the width at half maximum as measured with the vibrating probe decreas-
ed by a factor 3 when the beam was modulated. The focusing effect increased with in-
creasing modulation parameter and residual gas pressure and decreased with increas-
ing accelerating potential. Similar results were obtained with low modulation fre-
quencies (kilocycles per second). The collector was so modified as to permit the
positive ion current to be measured. The ion current was found to increase with in-
creasing modulation. The ion current accompanying a 1000 V beam at 10^{-5} mm Hg in-
creased by a factor 3 when the modulation parameter was increased from 0 to 1. The
increased efficiency of gas focusing for velocity modulated beams is ascribed to
the non-linearity of the ionization cross section as a function of electron energy:
the slowest electrons in the modulated beam produce many more ions than those of
average velocity, whereas the most rapid electrons produce only a few less. A mo-
dulated beam consequently produces more ions than an unmodulated beam of the same
average energy, and its space charge is accordingly more nearly neutralized. The
effect could be enhanced by judicious choice of the residual gas, and it should be
of technical importance in the design of low voltage electronic devices. Orig.art.
has: 6 figures.

Card 2/3

ACCESSION NR: AP4042007

ASSOCIATION: none

SUBMITTED: 30Aug63 [illegible] ENCL: 00

SUB CODE: EC, NP NR REF SOV: 002 OTHER: 000

3/3

ZINCHENKO, N.S.; ZHIGAYLO, B.A.

Effect of ion focusing in velocity modulated electron beams.
Zhur. tekh. fiz. 34 no.7:1306-1311 Jl '64 (MIRA 17:8)

ZINCHENKO, N.S.; ZHIGAYLO, B.A.

Interrelation between resonance regions in frequency doubling with the aid of ferrites. Zhur. tekh. fiz. 39 no.1:164-167 Ja '64.
(MIRA 17:1)

1. Institut radiofiziki i elektroniki AN UkrSSR, Khar'kov.

ACCESSION NR: AP4009938 S/0057/64/034/001/0164/0167

AUTHOR: Zinchenko, N.S.; Zhigaylo, B.A.

TITLE: Interaction between resonance regions of ferrite frequency doublers

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.1, 1964, 164-167

TOPIC TAGS: ferrites, frequency doublers, ferrite frequency doublers, ferrite frequency doubler resonances

ABSTRACT: The present paper reports results of experiments performed in 1959 on the frequency doubling of 8 mm and 4 mm microwaves by ferrites. With the 8 mm waves, ferrite samples in the form of semi-discs 1.6 mm thick with diameters of 3.2, 5, 7.2 and 10 mm were employed, as well as spheres 2.4 mm in diameter. With the 4 mm waves, only semi-discs 1 mm thick and 3.6 mm in diameter were used. The semi-discs were fastened to the narrow wall of the rectangular waveguide with their planes parallel to the wide wall. The spheres were supported in the center of the waveguide. The magnetizing field was perpendicular to the wide wall of the waveguide. The microwave powers at the initial and the doubled frequencies were monitored separately with thermistor bridges. The fraction of the incident power appearing at the doub-

ACC.NR: AP4009938

led frequency was investigated as a function of the magnetizing field strength. When the ferrite sample was small compared with the wavelength only one resonance was observed. For the larger samples, however, there were several resonances of different heights and widths. The number and configuration of these resonances depended not only on the sample size, but also on the angle between the uhf magnetic field and the magnetizing field. When this angle was varied continuously, the heights, widths and positions of these resonance changed continuously. In one of the three cases for which curves are given, there were five resonances at magnetizing fields between 14 000 and 19 000 Oe. [Abstracter's note: It is not stated whether this case is typical or extreme.] The observed resonances are ascribed to different magnetostatic vibration modes of the ferrite, which are excited by non-uniform spin precession in the sample. A quantitative theory is not attempted. The authors consider further investigation of this phenomenon to be desirable. "The authors thank I.D.Truten' and Ye.M.Kuleshov for their interest in the work and for making a number of instruments available." Orig.art.has: 3 figures.

ACC.NR: AP4009938

ASSOCIATION: Institut radiofiziki i elektroniki AN UkrSSR, Khar'kov (Institute of Radiophysics and Electronics, AN UkrSSR)

SUBMITTED: 12Dec61 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH, GE NR REF SOV: 000 OTHER: 003

Card 3/3

22

C. A. ZHIGAYLO, Ya. V.

Mechanism of explosive combustion of gaseous mixtures M. V. Polyakov and Ya. V. Zhigailo. (L. V. Pisarzhevskii Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 73, 1229-31(1950).—Neither the chain nor the thermal theory of explosion can account for the previously (*C.A.* 39, 1639⁴) observed initial rise of the yield of NO with increasing pressure and dimensions of the reaction vessel, in the explosive combustion of $CH_4 + O_2$ mixts. in the presence of N_2, followed by a fall to 0.4-0.5% under atm. pressure and in large reaction vessels. This rise of yield can be explained only by a transition from a chain to a thermal mechanism. The increase of the yield of NO with pressure and dimensions, due to ternary collisions with N_2, is halted with beginning predominance of the thermal mechanism, characterized by lower NO yields. An optimum yield of NO at a definite pressure and definite dimensions is observed in mixts. of any compn.; this contradicts Frank-Kamenetskii's interpretation (*C.A.* 42, 10c) of the NO yield in terms of richness of the combustible mixt. The change-over from a chain to a thermal mechanism accounts further for the exptl. variation of the yield of NO in mixts. of H_2 38, O_2 40, N_2 22%, in the presence of increasing amts. of $PbEt_4$. At const. pressure, that yield decreases sharply on addn. of very small amts. of $PbEt_4$ (0.0034%), and remains fairly const. up to 0.1% $PbEt_4$. Apparently, $PbEt_4$ takes part in the chain-breaking triple collisions and thus lowers the yield of NO. At const. $PbEt_4$, the yield of NO falls with the total pressure (300, 200, and 100 mm. Hg). The lower spark-ignition limit of the mixt. is raised sharply by 20-30 mm. Hg when the amt. of $PbEt_4$ is increased from 0.0034 to 0.034%, and then continues to rise very slowly with further increasing $PbEt_4$. In the low-pressure range, the explosive combustion is evidently a chain process, and $PbEt_4$ acts as a chain-breaking inhibitor. N. Thon

ZHIGAYLO, Ya. V.

5

USSR

Concerning the mechanism of nitrogen fixation in explosive combustion. Ya. V. Zhigailo and M. V. Polyakov (L. V. Pisarzhevskii Inst. Phys. Chem., Acad. [illegible] S.S.R., Kiev). *Dopovidi Akad. Nauk Ukr. R.S.R.* 195[illegible] 32-5 (Russian summary, 36); cf. C.A. 45, 1131[illegible]. The yield of NO in explosive combustion of mixtures of 56% of $2H_2O + O_2$, 22% of N_2 and 22% of O_2 depends on the initial pressure of the mixture, the vol. of the reaction vessel, addn. of Et_4Pb, and introduction of brass foil as heat absorber. Addn. of Et_4Pb causes displacement of the range of caloric explosions to higher pressures and to greater volumes of the reactor, and of the curve of yield vs. pressure toward higher pressures. Et_4Pb in low concns. inhibits, at low pressures, the transition of the beginning chain process to the range of caloric explosions. Introduction of brass foil into the reaction vessel decreases the yield of NO at 100–400 mm. of Hg from 0.9 vol. % to 0.1 vol. %, but increases it at 400–700 mm. of Hg from 1.3 vol. % to 2.3 vol. %. The exptl. results are interpreted in agreement with a view that the prevailing chain mechanism at the beginning of the explosion and at low pressures changes to a caloric one, and that NO is the product of a termol. chain termination. R. D

Visual observation of heterogeneous-homogeneous oxidation of hydrogen in the presence of platinum [illegible]

[illegible]

ZHIGAYLO, Ya. V.

Laboratory shelf evaporator. Zav.lab. 22 no.10:1255-1256 '56.
(MLRA 10:5)

1. Institut fizicheskoy khimii Akademii nauk USSR.
(Evaporation appliances)

KORNEYCHUK, G. P., ROYTER, V. A., STUKANOVSKAYA, N. A., RZAYEV, P. B., ZHIGAYLO, Ya. V.

"Study of the Effect of the Conditions of Catalysis on the Sulfur Content in th Barium-Aluminum-Vanadium Sulfate Catalyst."

Problemy Kinetics and Catalysis, v. 9, Isotopes in Catalysis, Moscow, Izd-vo AN SSSR, 1957, 442p.

Most of the papers in this collection were presented at the Conf. on Isotopes in Catalysis which took place in Moscow, Mar 31- Apr 5, 1956.

ZHIGAYLO, YA. V

KORNEYCHUK, G.P.; ROYTER, V.A.; STRUKANOVSKAYA, N.A.; RZAYEV, P.B.; ZHIGAYLO, Ya.V.

Influence of the conditions of catalysis on the sulfur content in barium-aluminum-vanadium sulfate catalyst. Probl. kin. i kat. 9: 329-336 '57. (MIRA 11:3)

(Catalysts) (Sulfur--Isotopes)

[illegible] V.

73-2-8/22

AUTHORS: Ushakova, V.P., Korneychuk, G.P., Royter, V.A. and Zhigaylo, Ya. V.

TITLE: Kinetics and mechanism of the oxidation of naphthalene on a oxyvanadium catalyst. 1: Investigation of the effect of the gas phase composition on the chemical composition of the catalyst and on the catalytic activity. (Kinetika i mekhanizm okisleniya naftalina na okisnovanadiyevom katalizatore. 1: Issledovaniye vliyaniya sostava gazovoy fazy na khimicheskiy sostav katalizatora i ego kataliticheskuyu aktivnost').

PERIODICAL: "Ukrainskiy Khimicheskiy Zhurnal" (Ukrainian Journal of Chemistry), Vol.23, No.2, March-April, 1957, pp.191-199 (USSR).

ABSTRACT: The possibility of poisoning of the catalysts at changing concentration of the reagents in the gaseous phase was investigated. A catalyst used in the plant reactor of the Rubezhansk Chemical factory was subjected to chemical analysis. V_2O_4 was determined with permanganate and V_2O_5 by titrating with ferrous ammonium sulphate. Tabulated results (Table 1) show that the catalyst is subjected to the biggest changes in the centre of the reactor. It

Card 1/3

73-2-8/22

Kinetics and mechanism of the oxidation of naphthalene on a oxyvanadium catalyst. 1: Investigation of the effect of the gas phase composition on the chemical composition of the catalyst and on the catalytic activity. (Cont.)

is shown that a partial reduction of V_2O_5 to lower oxides occurs during the catalysis of naphthalene-air mixtures. The low oxides are formed on the catalyst particles, in the centre of the catalyst particles the pentoxide is found. Catalysts prepared from lower oxides acidify after a certain time. Partial reduction of V_2O_5 sharply increases the electroconductivity of the catalyst and its catalytic activity. This makes it possible to investigate the kinetics of the process without having to consider the changes in the composition which are caused by changes in the concentration of naphthalene in the gaseous phase. Catalysts containing excessive quantities of lower oxides are very active but not selective. This seems to be caused by the high catalytic activity of the lower oxides in comparison with the pentoxide (complete oxidation of phthalic anhydride). Catalytic oxidation of phthalic anhydride can also be carried out with copper, aluminium and glass, the activity decreasing from copper to glass. The catalytic

Card 2/3

73-2-8/22

Kinetics and mechanism of the oxidation of naphthalene on a oxyvanadium catalyst. 1: Investigation of the effect of the gas phase composition on the chemical composition of the catalyst and on the catalytic activity. (Cont.)

oxidation of phthalic anhydride is strongly inhibited by naphthalene vapours. The catalyst changes gradually in such a manner that the most suitable conditions for a selective process are established. The reduced particles come into contact with the highly concentrated naphthalene containing solution. The particles consist of slightly active higher vanadium oxides.

There are 2 drawings, 5 graphs and 3 tables. There are 3 references, 1 of which is Slavic.

ASSOCIATION: Institute of Physical Chemistry imeni L.V.Pisarzhevsk, Academy of Sciences, Ukraine. (Institut Fizicheskoy Khimii im. L.V.Pisarzhevskogo AN USSR).

SUBMITTED: November 12, 1956.

AVAILABLE: Library of Congress

Card 3/3

5(3,4)

AUTHORS: Korneychuk, G. P., Royter, V. A., Zhigaylo, Ya. V. SOV/64-58-7-6/18

TITLE: Methods of Improving the Capacity and Selectivity of Vanadium Oxide Catalysts in the Oxidation of Naphthalene to Phthalic Anhydride (Puti povysheniya proizvoditel'nosti i izbiratel'nosti okisnovanadiyevykh katalizatorov dlya okisleniya naftalina vo ftalevyy angidrid)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 7, pp 410-413 (USSR)

ABSTRACT: I. P. Garkavenko and N. A. Konstantinova took part in the experiments. The small pore dimensions (diameter 10^{-4} to 10^{-5} cm) in fused vanadium pentoxide catalysts lead to diffusion inhibitions in the naphthalene oxidation. In the reaction the pentoxide in the naphthalene-air mixture is reduced to lower oxides. A disadvantage of the vanadium pentoxide catalysts is also the low melting-point of V_2O_5 (690°). To avoid the effect of the diffusion inhibitions mentioned above some experiments were carried out. The V_2O_5 was fused and tabletted. Besides, experiments with coarsely crystalline V_2O_5 were carried out. The time of contact was selected in such a way that no naphthalene could be proved in the outflow of the reactor at the

Card 1/2

Methods of Improving the Capacity and Selectivity of SOV/64-58-7-6/18
Vanadium Oxide Catalysts in the Oxidation of Naphthalene to Phthalic Anhydride

temperature of the experiment (indicator method) (Ref 5). Carbon monoxide and carbon dioxide were determined in the gas analyzer of the type VTI (Ref 6). The gas quantity was measured in a Mariotte (Mariot) container. The reaction products were collected in a Deward (D'yuard) container (with freezing mixture). It was found that at temperatures below 400° the monocrystalline non-porous catalyst is by far more efficient than the ordinary fused catalyst. A partly reduced catalyst had the advantage of a higher melting temperature than vanadium pentoxide. The following facts were found: The first part of the reactor (1/4 - 1/3) should be filled with a partly reduced catalyst (granulation 7-8 mm). The rest of the reactor is filled with coarsely crystalline V_2O_5 as the latter has a greater selectivity than the porous polycrystalline industrial catalyst. The temperature of the catalysis should be maintained at 380-400°, and a maximum rate of the gas flow should be employed where no passage of non-oxidized naphthalene can take place yet. There are 3 figures, 1 table, and 7 Soviet references.

Card 2/2

5(4)

SOV/69-21-3-19/25

AUTHORS: Piontkovskaya, M.A., Zhigaylo, Ya.V., Yeremenko, L.A., Neymark, I.Ye.

TITLE: The Change in the Structure and the Adsorption Capacities of Aluminum Hydroxide in Dependence on the Conditions of Its Formation

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 3, pp 347-350 (USSR)

ABSTRACT: The authors report on a study of the changes of the adsorption capacities of aluminum hydroxide in dependence on a less or more prolonged maturation period of the gel. The experiments revealed that the total of pore volume, and consequently, the adsorption capacities of aluminum hydroxide decrease in proportion to the increase of the ripening period. It results therefrom that during the ripening period (0-45 days) the gel undergoes structural changes, which are characterized by a transition from amorphousness to the crystalline state. X-ray investigation (Debye-Scherrer method)

Card 1/3

The Change in the Structure and the Adsorption Capacities of Aluminum Hydroxide in Dependence on the Conditions of Its Formation SOV/69-21-3-19/25

of the same samples fully confirmed the obtained results. The evaluation of the diffraction patterns resulted again in a structural transition of the gel from amorphousness to micro-and macrocrystalline formations. Samples with ripening periods of 2, 10 and 45 days showed a hydrargillite lattice. Heating of the same samples to a temperature of 900°C resulted in a change of the lattice into the structure of corundum. The authors mention the scientist L.I. Shikina, who took part in the adsorption measurements. There are 6 X-ray diffraction patterns, 3 graphs, 3 tables and 19 references, 7 of which are Soviet, 4 German, 4 English and 4 French.

Card 2/3

SOV/69-21-3-19/25

The Change in the Structure and the Adsorption Capacities of Aluminum Hydroxide in Dependence on the Conditions of Its Formation

ASSOCIATION: Institut fizicheskoy khimii AN USSR im. L.V. Pisarzhevskogo, Kiyev (Institute of Physical Chemistry of the AS UkrSSR imeni L.V. Pisarzhevskiy, Kiyev)

SUBMITTED: 6 November, 1957

Card 3/3

VOL'FSON, V.Ya.; ZHIGAYLO, Ya.V.; TOTSKAYA, Ye.F.; RAKSHA, V.V.

Nature of the active component of vanadium oxide catalyst for naphthalene oxidation. Kin. i kat. 6 no.1:162-166 Ja-F '65.

(MIRA 18:6)

1. Institut fizicheskoy khimii imeni Pisarzhevskogo AN UkrSSR.

ZHIGAYLO, Ya.V.; SHPAK, L.I.; GAYDEY, T.P.; DUCHINSKAYA, V.I.; RAKSHA, V.V.;
Prinimali uchastiye: KURGANOV, A.,; LANTSOVA, M.A.

Chemical transformations and phase transitions of a zinc-chromium catalyst of methanol synthesis. Khim.prom. no.1: 29-34 Ja '63. (MIRA 16:3)

1. Institut fizicheskoy khimii imeni L.V.Pisarzhevskogo AN UkrSSR.
(Catalysts) (Methanol)

ZHIGAYLO, Ya.V.; SHPAK, L.I.

Effect of potassium addition on the rate of regeneration of a zinc-chromium catalyst. Khim. prom. no.8:591-593 Ag '63.
(MIRA 16:12)

VOL'FSON, V.Ya.; KORNEYCHUK, G.P.; ROYTER, V.A.; ZHIGAYLO, Ya.V.

Characteristics of the catalytic oxidation of naphthalene. Part 3: Kinetics of naphthalene oxidation in long beds of vanadium catalysts. Ukr. khim. zhur. 26 no.5:588-593 '60. (MIRA 13:11)

1. Institut fizicheskoy khimii im.L.V.Pisarzhevskogo AN USSR i Rubezhanskiy khimicheskiy kombinat.

(Naphthalene) (Oxidation)

ZHIGAYLO, YA.V.

8/073/60/026/004/010/018/XX
B023/B064

AUTHORS: Korneychuk, G.P., Royter, V.A., Vol'fson, V.Ya., Zhigaylo, Ya.V. and Lyubiteleva, A.Z.

TITLE: Characteristics of the Catalytic Oxidation of Naphthalene. 2. Investigations of the Oxidation of Naphthalene in Long Layers of Vanadium Catalysts

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 4 pp. 432-439

TEXT: The authors performed a comparative investigation between the combined charge suggested by them (it consists of a partly reduced vanadium oxide catalyst and a coarse-crystalline vanadium pentoxide, Ref.2) and the catalysts used in industry. Along with this investigation the efficiency and selectivity of the naphthalene oxidation was studied on the basis of the products obtained, and the temperature conditions prevailing along the layer were examined. By means of an enlarged plant and a commercial reaction apparatus the authors obtained data proving that the combined charge of vanadium oxide catalysts is superior to the

Card 1/3

commercial reaction apparatus of vanadium pentoxide. Under these conditions the phthalic anhydride yield reached 80-85%. Under worse conditions of heat reduction and temperature balance in the commercial reaction apparatus the selectivity of the combined charge amounts to 76-78% (that of the industrial being 63-70%). Thus, the naphthalene consumption is reduced by 25%. The efficiency of the catalysts did not decrease. Data were obtained on the efficiency and selectivity of the vanadium catalyst with respect to phthalic- and maleic anhydride. The optimum experimental conditions, the change of the naphthalene concentration, its oxidation products and temperature were determined by taking samples along the layer of the vanadium catalysts. The authors found that at a given temperature and concentration of naphthalene in the gas mixture an optimum flow rate exists, which warrants a maximum yield of phthalic anhydride. It corresponds to the maximum velocity at which no naphthalene leaves the output of the plant. The method applied, in combination with the indicator method which serves to determine the naphthalene which has not entered into reaction, is suited for a quick and reliable evaluation of

Card 2/3

the efficiency and selectivity of naphthalene oxidation catalysts, and also for determining the kinetic laws. A.T. Beskrovnaya, L.S. Fal'kovich and T. A. Sidorovich took part in the investigations. The authors thank S.T. Rashevskaya, head of the Tsentral'naya zavodskaya laboratoriya of the Rubezhanskiy Khimkombinat (Central Works Laboratory of the Rubezhanskiy Chemical Kombinat) for her help in the experiments. There are 3 figures, 3 tables and 8 Soviet references.

ASSOCIATION: Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN USSR (Institute of Physical Chemistry imeni L.V. Pisarzhevskiy of the Academy of Sciences, UkrSSR). Rubezhanskiy khimicheskiy kombinat (Rubezhnoye Chemical Kombinat)

SUBMITTED: July 7, 1959

Card 3/3

S/073/60/026/005/007/019
B004/B063

AUTHORS: Vol'fson, V. Ya., Korneychuk, G. P., Royter, V. A., Zhigaylo, Ya. V.

TITLE: Peculiarities of the Catalytic Oxidation of Naphthalene. 3. Kinetics of the Oxidation of Naphthalene in Long Layers of Vanadium Catalysts

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 5, pp. 588-593

TEXT: The purpose of the present work was to obtain data on the mechanism underlying the oxidation of naphthalene on vanadium catalysts under conditions comparable to those applied in industry. The following catalysts were used: 1) a commercial catalyst from molten V_2O_5; 2) a "combined mixture" with partly reduced V_2O_5. This catalyst had been suggested by the authors in Ref. 3; 3) tablets of the commercial vanadium-potassiumsulfate-silica gel catalyst (combined vanadium catalyst). Each experiment took 12-14 h. 2-3 h before the end of the experiment, samples were taken along

Card 1/3

Peculiarities of the Catalytic Oxidation of Naphthalene. 3. Kinetics of the Oxidation of Naphthalene in Long Layers of Vanadium Catalysts

S/073/60/026/005/007/019
B004/B063

the catalyst layer, which were used to study the variations in concentration of naphthalene, naphthoquinone, maleic anhydride, CO_2, and CO. It was found that the partial reactions occurring during the oxidation of naphthalene on V_2O_5 catalysts obey the following kinetic equations:
1) $v_1 = k_1C_n$ (formation of phthalic anhydride); $k_1 = 4.5\cdot10^{-3}-4.6\cdot10^{-3}$; C_n = concentration of naphthalene. 2) $v_2 = k_2\cdot C_n^{0.5}$ (formation of maleic anhydride); $k_2 = 0.0665\cdot10^{-5} - 0.0835\cdot10^{-5}$. 3) $v_3 = k_3\cdot C_n^2$ (formation of naphthoquinone); $k_3 = 54 - 47.5$ [Abstracter's note: Obviously a misprint].
4) $v_4 = k_4\cdot C_{nq}$ (oxidation of naphthoquinone); $k_4 = 2.47\cdot10^{-3}-2.55\cdot10^{-3}$; C_{nq} = concentration of naphthoquinone. 5) $v_5 = k_5C_n$ (formation of products on account of intense oxidation); $k_5 = 1.10\cdot10^{-3} - 1.5\cdot10^{-3}$. The partial reactions occurring during oxidation on the combined vanadium catalyst obey the following equations: 1) $v_6 = k_6$(formation of phthalic anhydride);

Card 2/3

KORNEYCHUK, G.P.; ROYTER, V.A.; VOL'FSON, V.Ya.; ZHIGAYLO, Ya.V., LYUBITELEVA, A.Z.

Characteristicsof the catalytic oxidation of napht alene. Part 2: Oxidation of naphthalene of long layers of vanadium catalysts. Ukr. khim. zhur. 26 no.4:432-439 '60. (MIRA 13:9)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN USSR i Rubezhanskiy khimicheskiy kombinat.

(Naphthalene) (Vanadium)

ROYTER, V.A.; KORNEYCHUK, G.P.[Korniichuk, H.P.]; VOL'FSON, V.YA.;
ZHIGAYLO, Ya.V.[Zhyhailo, IA.V.]

Kinetics of the oxidation of naphthalene in commercial layers of vanadium catalysts. Dop.AN URSR no.3:345-348 '60. (MIRA 13:7)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN USSR i Rubizhanskiy khimicheskiy kombinat. 2. Chlen-korrespondent AN USSR (for Royter).
(Naphthalene) (Oxidation)

ZHIGAYLOV, L.S.

Intratracheal penicillin injections in bronchopneumonia in calves.
Veterinariia 32 no.10:67-68 O '55. (MLRA 8:12)

1. Veterinarnyy vrach veterinarnogo uchastka Martukskogo rayona, Aktyubinskoy oblasti.
(LUNGS--DISEASES) (CALVES--DISEASES) (PENICILLIN)

ZHIGAYLOV, N.N., inzhener.

Work in a mechanized stone quarry. Biul.stroi.tekh.13 no.10:29-33 O '56. (MIRA 10:1)

1. Ukrainskiy Gosudarstvennyy trest po proektirovaniyu gidroelektricheskikh stantsiy i gidroenergouzlov.
(Kakhovka--Quarries and quarrying)

ZHIGAYLOV, N.N.; Inzh.

Quarries and Quarrying

Work organization in the stone quarry of the Kakhovka hydroelectric station. Biul. stroi. tekh. 9 no. 4, 1952 Ukrgidep

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

ZHIGILIY, V. [Zhyhilii, V.]

Animals on the postage stamps of different countries. Znan. ta pratsia no.5:32 My '60. (MIRA 13:10)
(Postage stamps--Animals)

ZHIGIREV, L.G.; SLADKOV, F.P.

Conditions of parallel operation of automated auxiliary boilers of ships. Sudostroenie no.8:31-34 Ag '65. (MIRA 18:9)

STEPANOV, N.M.; VASIL'TSOV, A.M.; ZHIGIS, S.Yu., inzh., retsenzent; MARENKOVA, G.I., inzh., red.; VOROTNIKOVA, L.F., tekhn. red.

[RPB and BPLTs semiautomatic block systems] Sistemy putevoi poluavtomaticheskoi blokirovki RPB i BPLTs. Moskva, Transzheldorizdat, 1963. 182 p. (MIRA 16:10)
(Railroads--Signaling--Block system)

TRUDOLYUBOV, B.A.; ZHIGLEVICH, B.P., redaktor; MUSHTAKOVA, L., tekhnicheskiy redaktor

[Methods of preparing and feeding hay meal] Tekhnika prigotovleniia i skarmlivaniia sennoi muki. Moskva, Gos. izd-vo selkhoz. lit-ry, 1950. 66 p. (MIRA 10:1)
(Hay)

ZHIGLEVICH, B.P.; CHAUS, V.M.; SHMANEV, M.N.; TARASOV, D.V.

Potato storage following machine harvest. Sel'khozmashina no.4: 21-22 Ap '57. (MIRA 10:4)

1. Institut kartofel'nogo khozyaystva (for Zhiglevich). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya (for Chaus, Tarasov). 3. Timiryazevskaya sel'skokhozyaystvennaya akademiya (for Shmanev).
(Potatoes--Storage)

POLKANOV, L.D.; ZHIGLEVICH, S.V., kand. tekhn. nauk, dots.,
otv. red.; KHRYAPCHENKOV, A.S., kand. tekhn. nauk,
dots., otv. red.; KOZIULINA, R.M., red.

[Marine gas turbine installations; manual] Sudovye gazoturbinnye ustanovki; uchebnoe posobie. Gor'kii. Pt.2. [Turbocompressors, heat exchangers, combustion chambers] Turbokompressory, Teploobmenniki, Kamery sgoraniia. 1963. 155 p. (MIRA 17:9)

1. Gorki. Politekhnicheskiy institut.

ARKHANGORODSKIY, L.A.; BUKSHTEYN, Ya.A.; VOROB'YEV, S.V.; GAYENKO, P.A.; DOLGOV, Ye.N.; ZHIGLIN, A.A.; ZUBOVSKIY, G.P.; ISHKOV, I.G.; KRYZHANOVSKAYA, G.L.; LISTRATOV, A.A.; LUR'YE, B.I.; MOROZOV, N.P.; OSTROZETSER, A.S.; PAVLOV, N.A.;PETROV, L.M.; POPOV, V.N.; TARTAKOVSKIY. M.A.; TAUBE, D.N.; KHANIN, L.T.; SHAPIRO, TS.S.; SHVEYTSBURG,B.A.; SHEVTSOV, V.D.; DENISENKOVA, L.M., red.

[Assembler's handbook on performing mechanical assembly and special work on grain elevators and grain processing enterprises] Spravochnik montazhnika; po proizvodstvu mekhanomontazhnykh i spetsial'nykh rabot na elevatorakh i predpriiatiiakh po pererabotke zerna. Moskva, TSentr. in-t nauchno-tekhn. informatsii i tekhniko-ekon. issl., 1963. 519 p. (MIRA 17:7)

C.A. ZHIGLINSKAYA, Ye. A.

Jerusalem artichoke as silage outside of the chernozem zone. E. A. Zhiglinskaya. *Sovet. Agron.* 1950, No. 7, 79-84.—Data are given on the chem. compn. of the Jerusalem artichoke comparing it with the compn. of sunflower as a source of silage.
J. S. Joffe

Q

Country : USSR
CATEGORY : Farm Animals. General Problems

ABS. JOUR. : RZBiol., No.13, 1958, No. 59464

AUTHOR : Zhiglinskaya, Ye. A.
INST. : -
TITLE : Comfrey [Symphytum] as a Valuable Fodder Plant

ORIG. PUB. : Svinovodstvo, 1957, No 9, 19-21

ABSTRACT : Brief characteristics of comfrey, its biological peculiarities, conditions of growing and cultivation, and manner of feeding to animals are described. In its chemical composition, comfrey is similar to leguminous plants. In different stages of development, it contains 11.52-18.04% of abs. dry substance, 12.07-15.64% of raw ash, 9.8-24.35% of raw protein, 8.57-22.46% of albumin, and 10.52-18.25% of raw cellulose (per abs. dry

CARD: 1/2

COUNTRY : USSR
CATEGORY : Farm Animals. General Problems

Q

ABS. JOUR. : RZBiol., No. 13, 1958, No. 59464

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT cont'd. : substance). Comfrey is a high-producing crop which can be cultivated in all climatic zones of the USSR. The author recommends its use on swine breeding farms as green fodder and silage.-- A. D. Musin

CARD: 2/2

Q - 5

ZHIGLINSKAYA, YE. A

USSR /Chemical Technology. Chemical Products and Their Application I-10

Pesticides

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31355

Author : Zhiglinskaya Ye. A.

Inst : Leningrad Oblast' Agricultural Experiment Station

Title : Use of Herbicides to Control Weeds in Grain Fields

Orig Pub: Sb. tr. Leningr. obl. s.-kh. opyt. st., 1956, No 24, 13-22

Abstract: Under conditions of the Leningrad Oblast' 2,4-D is more effective against weeds in grain fields, than 2M-4X.

Card 1/1

ZHIGLINSKAYA, Yevgeniya Aleksandrovna; RYUMIN, Nikolay Nikolayevich; TITOV, Timofey Fadeyevich; PEN'KOVA, G.A., red.

[Green manure crops] Sideratsionnye kormovye kul'tury. Leningrad, Kolos, 1965. 263 p. (MIRA 18:4)

BASKAKOV, V.S.; VIKHLYAYEV, V.M.; GAVRILOV, R.I.; GREBNEV, P.A.; ZHEMCHUZHNIKOVA, Ye.Ye.; IDEL'SON, I.D.; MEN'SHIKOV, N.S.; MOROZOVA, Yu.G.; POPOV, V.A.; FEDOROV, S.F.; PAVLOV, Ya.M., dotsent, kandidat tekhnicheskikh nauk, redaktor; ZHIGLINSKIY, A.A., inzhener, redaktor; BUNICH, K.N., inzhener, redaktor; SOKOLOVA, L.V., tekhnicheskiy redaktor

[A collection of drawings for parts used in machine building] Sbornik mashinostroitel'nykh chertezhei dlia detalirovok. Izd. 2-oe, dop. i perer. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 1 v., 50 l. (MIRA 10:2)
(Machinery--Design)

ZHIGLINSKIY, A.G.

USSR/ Laboratory Equipment. Apparatuses, Their Theory, I
Construction and Application.

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27312.

Author : A.L. Osherovich, A.G. Zhiglinskiy.

Inst : Leningrad University.

Title : Photoelectric Arrangement for Recording Ultrathin Structure of Spectral Lines.

Orig Pub: Vestn. Leningr. un-ta, 1956, No. 4, 3 - 8.

Abstract: The photoelectric arrangement with FEU-17 and FEU-18 for the recording of the ultrathin structure (UTS) of lines in the visible spectrum range is described. The photocurrent is amplified by a single stage amplifier and recorded by a EPP-09. An indicator unit for giving monitoring pulses to

Card 1/2

USSR/ Laboratory Equipment. Apparatuses, Their Theory, I
Construction and Application.

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27312.

the EPP-09 at a pressure change in the apparatus is developed. It is shown that the changing over to the photoelectric recording does not decrease the resolving power of the apparatus.

Card 2/2

Zhiglinskiy, #6

AUTHOR: ZHIGLINSKIY, A. G. 51-1-2/18

TITLE: Isotopic Spectral Analysis of Lead by a Photoelectric Method. (Izotopicheskiy spektral'nyy analiz svintsa fotoelektricheskim metodom.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr.1, pp.9-15. (USSR)

ABSTRACT: This paper deals with the relationship of isotopic concentration and the intensity of the corresponding component of hyperfine structure (h.f.s.), and isotopic analysis based on this dependence. The source of light was a water-cooled iron hollow cathode. The cathode was part of a discharge tube filled with argon at 0.5-0.6 mm Hg. Lead in the form of lead iodide was placed in the hollow cathode. 0.5-2 mg of lead was used. The current feeding the discharge tube was stabilized (stabilizer circuit is given in Fig.4). The optical system was the same as that described in Ref.4. It consisted of a monochromater, condenser, Fabry-Perot etalon with multilayer dielectric mirrors (these mirrors were supplied by F.A. Korolev of the Moscow State University). The

Card 1/3

51-1-2/18

Isotopic Spectral Analysis of Lead by a Photoelectric Method.

reflectivity of mirrors was 89% for 4000 Å, the coefficient of absorption was 6% for the same wavelength. The light was recorded by means of a photomultiplier cooled with liquid air (Fig.5). Lead was obtained from samples of rock containing from about 0.01% to more than 10% of Pb. The samples containing less than 10% of Pb were enriched chemically. Line 4058 Å of PbI was used for isotopic analysis. This line is the most intense one in the visible part of Pb spectrum and its wavelength lies in the region of maximum sensitivity of caesium-antimony photomultipliers. H.f.s. of this line is shown in Fig.6. Actual results are shown in Fig.7. They were obtained using a 15 mm thick Fabry-Perot etalon. The results are given for 5 samples in Table 2. For each sample the upper line gives the result obtained by isotopic analysis, and the lower line the mass-spectrometric result (Ref.9 & 10). Repeatability of results in relative units is given in Table 3. For 10 to 100% of a particular isotope in a sample the error of the isotopic analysis is about 4%. The minimum measurable isotopic concentration is about 1%. The analysis of one sample takes 2 hours.

Card 2/3

51-1-2/18

Isotopic Spectral Analysis of Lead by a Photoelectric Method.

Enrichment of samples occupies one day. Preparation of samples containing more than 10% of lead takes about 1 hour. The author thanks Professor A. N. Zaydel' for his advice and interest. There are 7 figures, 3 tables and 10 references, 6 of which are Slavic.

SUBMITTED: December 7, 1956.

AVAILABLE:

Card 3/3

ZHIOLINSKIY, A.G. Cand Phys Math Sci -- (diss) "Spectral method for determining the isotopic composition of lead." Len 1958, 12 pp (Len Order of Lenin State Univ im A.A. Zhdanov) 100 copies (KL, 21-58, 87)

51-4-2-4/28

AUTHORS: Zhiglinskiy, A. G., Zaydel', A. N. and Chayko, Yu.

TITLE: On the Problem of Spectral Determination of the Isotopic Composition of Lead. (K voprosu o spektral'nom opredelenii izotopnogo sostava svintsa.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, Nr.2, pp.152-155 (USSR).

ABSTRACT: The method of spectral analysis of the isotopic composition of lead, using photoelectric recording of hyperfine structure of the Pb I line at 4 058 Å observed by means of a Fabry-Perot etalon, was described earlier by Zhiglinskiy (Ref.1). Several months later Brody, Tomkins and Fred (Ref.2) described a similar method. Zhiglinskiy used two approaches to the problem of isotopic analysis. First he assumed that intensities of the isotopic spectral structure components are in the same ratios as the concentrations of the corresponding isotopes. In this case a number of corrections were necessary in the calculations. Secondly Zhiglinskiy checked the first method by the use of calibrating standards of known isotopic composition. He found that isotopic analysis without the use of standards was

Card 1/4

On the Problem of Spectral Determination of the Isotopic Composition of Lead.

accurate to about 7%, while using standards this accuracy could be improved to about 4%. Brody, Tomkins and Fred (Refs. 2, 3) employed the method which does not require standards. In that method the main errors are due to overlapping of lines and to re-absorption. The corrections necessary for overlapping and re-absorption increase with the increase of the current density in the hollow discharge tube used, as well as with the decrease of the resolving power of the apparatus. The authors of Ref.2, 3 had to work at high current densities and insufficient resolving power. The poor resolving power is shown in Fig.1, where the left-hand curve was obtained by the present authors and the right-hand curve is copied from Ref.2. Under the conditions selected by the authors of Ref.2, 3, self-absorption was so great that correction for it reached 0.5 of the observed intensity values. To avoid the errors of Refs. 2, 3, the present authors repeated measurements using low current densities and cooling the hollow cathode with liquid air. The lines

51-4-2-4/28

On the Problem of Spectral Determination of the Isotopic Composition of Lead.

were then found to be practically free from self-absorption, and they possessed small Doppler width. The resolving power of the apparatus was sufficient to obtain complete resolution of the hyperfine structure components, except the components of Pb^{208} and Pb^{207}s. Fig.2 shows that the optical results obtained by the authors agreed very well with mass-spectrometric data. If, instead of liquid air, water is used for cooling of the hollow cathode, the Doppler width is higher and consequently the results for Pb^{207} and Pb^{208} isotopic concentrations are poorer (Table 1). Lowering of the temperature of the hollow cathode does not affect the results of Pb^{206} very much. Under the conditions used by the present authors it is possible to determine concentrations of isotopes down to 1% (Table 2). When the concentration of the isotope is higher than 10% the relative precision of analysis described here amounts to 2 - 4% of the isotopic content. This precision is comparable with mass-spectrometric measurements. There are 2 figures, 2 tables, and 5 references of which 2 are

Card 3/4

51-14-2-4/28

On the Problem of Spectral Determination of the Isotopic Composition of Lead.

Soviet, 2 English and 1 German.

ASSOCIATION: **Scientific Research Institute of Physics of the Leningrad State/ University.**
(Nauchno-issledovatel'skiy fizicheskiy institut, Leningradskogo gosudarstvennogo universiteta.)

SUBMITTED: May 11, 1957.

1. **Lead isotopes-Determination** 2. **Lead isotopes-Spectrographic analysis**

Card 4/4

ZHIGLINSKIY, A. G.; ZAYDEL', A. N.

"Contemporary Methods for the Spectroscopic Determination of the Isotopes of the Elements."

report submitted to 11th Intl Spectroscopy Colloq, Belgrade, 30 Sep-4 Oct 63.

ZHIGLINSKIY, A.G.; KOCHEMIROVSKIY, A.S.

Spectrum analysis of boron isotopes. Vest. LGU. 18 no.16:
62-68 '63.
(MIRA 16:11)

ZHIGLINSKIY A. G.

K

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis.

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2265

Author : Zajdel, A., Zhiglinski, A., Cajko, J.

Inst : Leningrad State University

Title : Spectral Method of Determining Isotopic Composition of Lead. Part I.

Orig Pub : Chekhosl. fiz. zh., 1958, 8, No 5, 530-543

Abstract : The authors describe the spectral standardless method of the analysis of the isotopic composition of Pb by the relative intensities of the components of the hyperfine structure of the 4058 Å line. The spectra of the investigated samples were excited in a cooled hollow cathode. The optical portion of the apparatus consisted of a monochromator and a Fabry-Perot etalon. The intensities of the components were registered by

Card 1/2

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis. K

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2265

a photomultiplier with amplifier and automatic recorder at the output. The scanning of the spectra was by varying the pressure in the pressure chamber of the etalon. A detailed description of the apparatus and of the operating technique is given. Methods that take into account possible distortions in the results of the analysis are indicated.

Card 2/2

K

CZECHOSLOVAKIA/Optics - Optical Method of Analysis.

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2267

Author : Zajdel, A.N., Zhighinski, A.G., Cajko, J.

Inst : Leningrad State University

Title : Spectral Method of Determining the Isotopic Composition of Lead. Part II.

Orig Pub : Chekhosl. fiz. zh., 1958, 8, No 6, 665-684

Abstract : The author describes various versions of a procedure for analyzing the isotopic composition of Pb, providing for the determination of $Pb^{204, 206, 207, 208}$. The lead was extracted from the analyzed samples with the aid of a preliminary chemical processing in the form of PbI_2. The spectra were excited in a hollow cathode, cooled with liquid air. The spectral instrument was a monochromator, crossed with a

Card 1/2

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis.

K

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2267

Fabry-Perot etalon. The spectra were registered with a photoelectric automatic recording device. The analysis is based on the measurement of the intensities of the components of the hyperfine structure of the PbI 4058 Å line. Several versions are proposed both for the standardless method and for the one employing standards, as well as several methods of computation.

For Part I see Abstract 2265. -- M.E. Briteke

Card 2/2

K

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis.

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2266

Author : Zajdel', A.N., Ziglinskiy, A.G., Cajko, J.
Inst : -
Title : Spectral Method of Determination of Isotopic Composition of Lead. Part I.

Orig Pub : Mat.-fyz. casop. 1959, 9, No 1, 29-45

Abstract : See Abstract 2265.

Card 1/1

ZHIGLINSKIY, A.G.

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis. K

Abs Jour : Ref Zhur Fizika, No 1, 1960, 2268

Author : Zakdel', A.N., Ziglinskij, A.G., Cajko, J.

Inst : -

Title : Spectral Method of Determining the Asymptotic Composition of Lead. Part II.

Orig Pub : Mat.-fyz. casop., 1959, 9, No 1, 46-68

Abstract : See Abstract 2267.

Card 1/1

L 22266-66

ACC NR: AR6005179 SOURCE CODE: UR/0058/65/000/009/A021/A021

29
B

SOURCE: Ref. zh. Fizika, Abs. 9A177

AUTHORS: Zhiglinskiy, A. G.; Kochemirovskiy, A. S.; Putilin, E. S.

TITLE: Photoelectric photometer for measurement of weak hyperfine structure components AW 10

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, T. 2, vyp. 1, 1964, 595-604

TOPIC TAGS: photoelectric method, photometer, hyperfine structure, spectrophotometry

TRANSLATION: A recording photoelectric photometer is described, comprising a dc ratio meter with photomultipliers as pickups. The use of the signal-division principle in the photometer makes it possible, when using input circuits with large time constants, to determine the investigated intensity within a practically satisfactory time. The circuit is insensitive to changes in the light-source brightness. The photometer was tested in apparatus for the study of the hyperfine structure. Results of the investigation of the proposed scheme and its comparison with the single-channel scheme are presented.

SUB CODE: 20

Card 1/1 ast

L 21823-66 EWP(j)/EWT(m)/ETC(m)-6/T IJP(c) RM/WW/GS
ACC NR: AT6006251 SOURCE CODE: UR/0000/65/000/000/0100/0109

AUTHOR: Solomko, V. P.; Zhigotskiy, A. G.; Uskov, I. A.

48

ORG: Kiev State University (Kievskiy gosudarstvennyy universitet)

B+1

TITLE: Mechanical properties of filled plasticized polymer sheets 15,4455

SOURCE: AN UkrSSR. Modifikatsiya svoystv polimerov i polimernykh materialov (Modification of the properties of polymers and polymeric materials). Kiev, Naukova dumka, 1965, 100-109

TOPIC TAGS: solid mechanical property, polymer, synthetic material, glass textolite, structural plastic

ABSTRACT: The effect of the concentration of fiber glass 15 and dibutylphthalate fillers on breaking stress σ_p, elongation ε_p, and initial modulus of elongation E 15 of polystyrene 15 and polymethacrylate 15 sheets was examined at 3 and 30 mm/min stretching rates. Sheets of polystyrene ($8 \cdot 10^4$ mol wt) and polymethylmethacrylate ($7.2 \cdot 10^5$ mol wt) containing 0, 0.5, 1, 2.5, 5, 10, 15 and 20 wt % of alkali-free fiber glass

Z

Card 1/2

L 21823-66

ACC NR: AT6006251

0

(8 microns in diameter and 3 mm in length) and, also, sheets of polystyrene with polymethylmethacrylate containing 0, 0.5, 1, 2.5, 5, 10, 15 and 20 wt % of fiber glass and 5 and 20 wt % of dibutylphthalate plasticizer were used. The polystyrene and polymethylmethacrylate sheets were prepared by precipitation with methyl alcohol from their toluene solutions. The changes in σ_p, elongation ε_p, and initial modulus of elongation *E* for polystyrene are graphed. Orig. art. has: 4 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: 06Oct65/ ORIG REF: 010/ OTH REF: 000

Card 2/2 nst

L 25846-66

ACC NR: AR5018681 SOURCE CODE: UR/0196/65/000/007/V005/V005

33

B

AUTHOR: Zhiglinskiy, A.G.; Kochemirovskiy, A. S.; Putilin, E. S.

ORG: none

TITLE: Photoelectric photometer for measuring weak spectroscopic (STS) components

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 7V19

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 595-604

TOPIC TAGS: [redacted], photometry, photometer, photomultiplier, spectroscopy

TRANSLATION: A recording photoelectric photometer is proposed, which is a logometer of a direct current with photomultipliers as transmitters. The use in this photometer of the signal division principle makes it possible, with the help of large time constants of input circuits, to determine the intensity under study for a practically satisfactory period of time. The system is not sensitive to variations in the luminosity of the light source. The results of the research made on the proposed system and a comparison with a one-channel system are given. (From a resume)

2

SUB CODE: 20 SUBM DATE: none

Card 1/1

UDC: 535.247:621.383